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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/668,799 | 09/23/2003 | Scott R. Culler | 58718US002 | 4097 |

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EXAMINER

SHAKERI, HADI

ART UNIT PAPER NUMBER

3723

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,799

Applicant(s)

CULLER ET AL.

Examiner

Hadi Shakeri

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 011805;011905;03225; 042205&051205.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

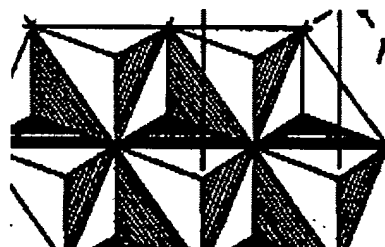
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5-7, 9, 11, 13-18, 21-23, 25, 27 and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Pieper et al. (5,152,917).

Pieper et al. discloses all of the limitations of claims 1 and 17, i.e., abrasive array of protruding units, wherein a distal linear apex for each unit when projected on to a coplanar plane with its respective base, extends between non-central points on opposite first and second sides, e.g., sawtooth shapes which does not necessarily mean the side is 90 degrees or orthogonal to the base, further see embodiment of Fig. 18, similar to the embodiment of Fig. 6A of the instant application.



Regarding claims 2, 5, 7, 9, 11, 13, 15, 16, 18, 21, 23, 25, 27, 29 and 31, Pieper et al. meets the limitations, e.g., rectangular base, linear regions being parallel with substantially the same shape and size, having a substantially constant distance to the base or coplanar, and consisting of aluminum oxide.

Regarding claims 6 and 22, Pieper et al. meets the limitations, i.e., the distal linear region being perpendicular to the sides defining the other sides of the four-sided rectangular base.

Art Unit: 3723

Regarding claims 14 and 30, Pieper et al. meets the limitations, i.e., the high peaks varying within 10%, (07:13-15).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 4, 8, 10, 12, 19, 20, 24, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Pieper et al.

Pieper et al. discloses the claimed invention except for the use of the specific size, different shapes (base, linear regions). Although Pieper et al. discloses that different shapes, periods, optimum shape of the composites depends upon particular abrading applications (08:16-18, 34-38), appearing to anticipate claims 8, 10, 12, 24, 26 and 28, these claims are rejected under obviousness modifications. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the specific size, in tailoring the article for a particular application, since it has been held that changing shape, dependent on work-piece parameters, involves only routine skill in the art. *In re Stevens*, 101 US PQ 284(CCPA1954).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

6. Applicant's arguments filed 04/04/05 have been fully considered but they are not persuasive.

The argument that Pieper et al. does not disclose a two-by-two array, is not persuasive, since Fig. 9 is a side view of a segment of the abrasive article, and the article as further evident and disclosed by Fig. 8, includes more than one array of protruding units, which meets "at least two-by-two array of protruding units" as defined by specification as originally filed. Further Pieper et al. discloses e.g., (08:16-20) and (08:35-38) that the shape and periods or number of composites per unit area is varied depending upon the abrading applications, further other embodiments, e.g., Fig. 18 discloses at least two by two arrays.

The argument that the linear region as disclosed by Fig. 9 of Pieper et al. is at the perimeter of the base is not persuasive, because first a base defined by a "perimeter" that has first side and an opposite second side is not a line as it appears to be argued by the applicant, rather the outer limits of an area that defines the base, therefore the linear region is not and cannot be positioned at the perimeter, but possibly a portion thereof. Secondly, a sawtooth

Art Unit: 3723

shape does not necessarily mean orthogonal base, in fact the shape as disclosed in Fig. 9 of Pieper et al. discloses a non-orthogonal side.

The argument regarding Rouser et al. is persuasive, event though Rouser et al. discloses abrasive (7) in Fig. (9) which was considered to meet the limitations in the preamble (e.g., body having abrasive grains), upon further consideration and argument on record, the rejections is now withdrawn, because "an abrasive array" as recited and defined by specification is not met by the array (e.g., 15, 35) as disclosed by Rouser et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is (571) 272-4495. The examiner can normally be reached on Monday-Friday.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hadi Shakeri
Primary Examiner
Art Unit 3723
June 16, 2005